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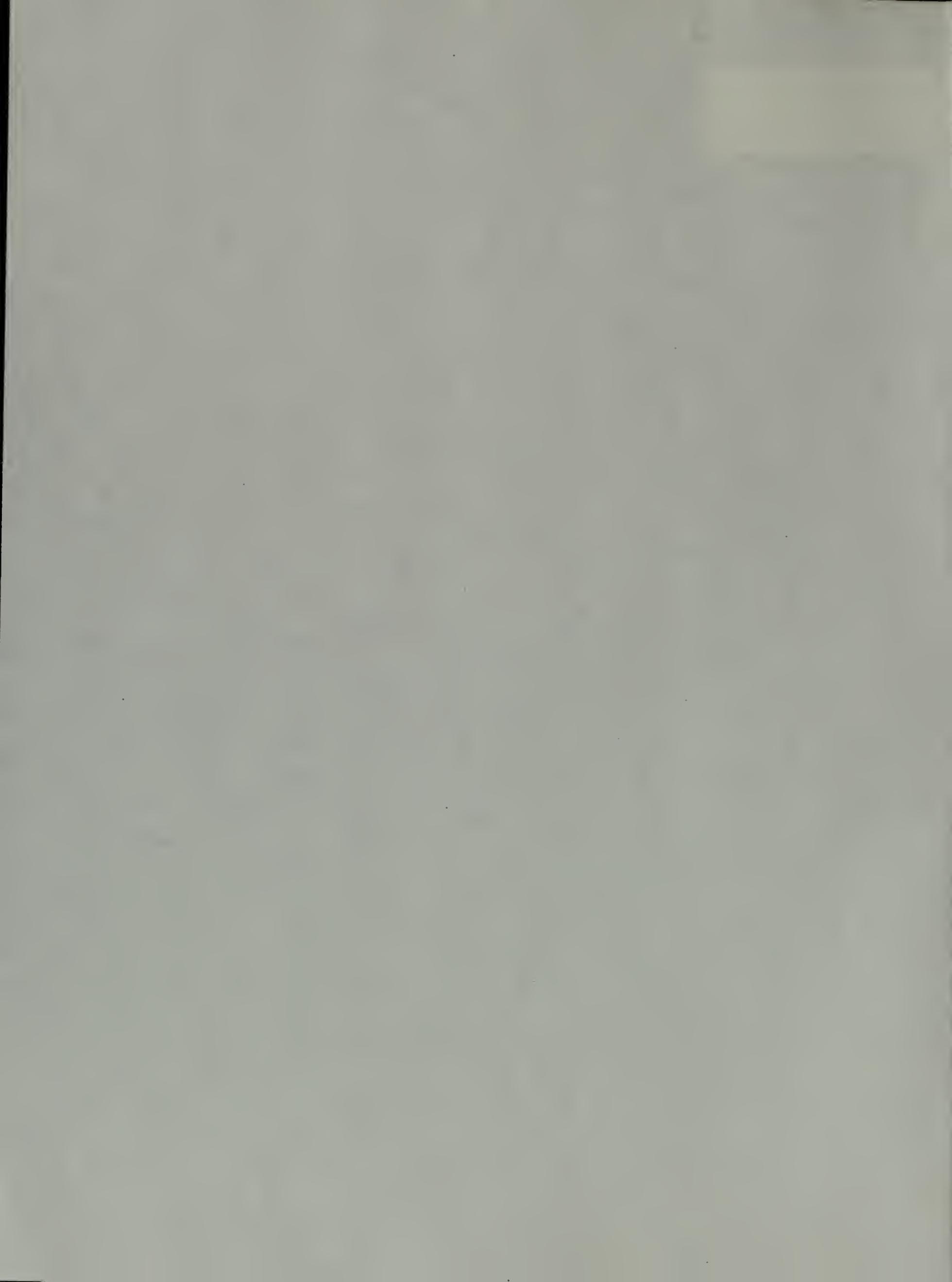
JOBs AND THE MASSACHUSETTS ECONOMY IN THE YEAR 2000:
INVESTING IN PEOPLE

Preliminary Report
The Blueprint 2000 Project
Office of the Lieutenant Governor
January 31, 1989

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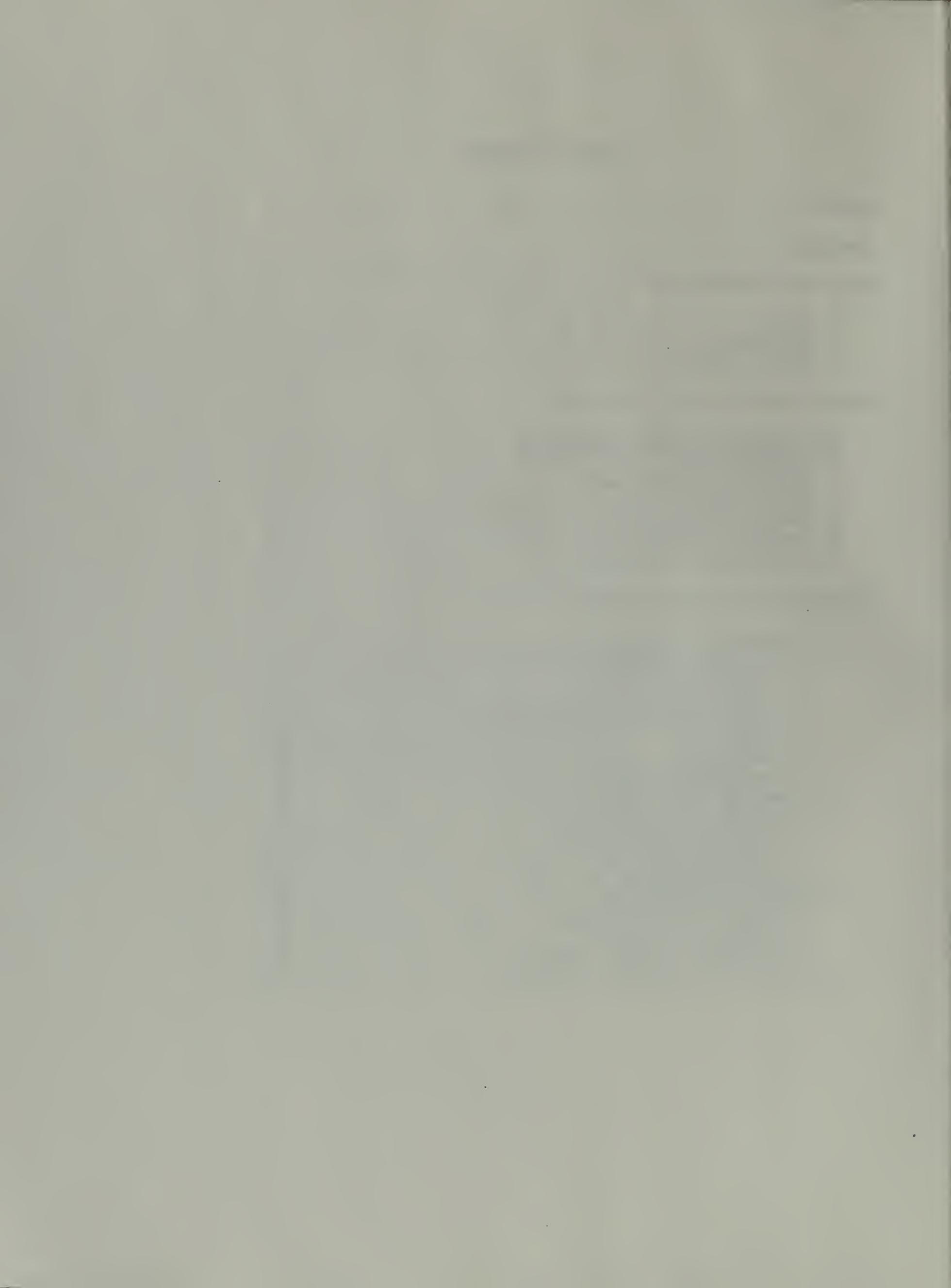


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PREFACE

Blueprint 2000 seeks to chart a course of action for state government that helps assure that all residents of Massachusetts enjoy the highest possible quality of life into the 21st century.

The project was initiated by Lieutenant Governor Evelyn Murphy when she took office in 1987 and, to date, has involved two years of research and public dialogue. While a complete Blueprint 2000 report will not be published until late 1989, pre-publication drafts of major chapters are being released individually for public comment, starting with this report on jobs and the economy.

The work of Blueprint 2000 has been organized around committees dealing with four broad subject areas -- employment, education, human support and criminal justice, and physical environment (defined broadly to include transportation, housing and energy as well as the natural environment). Other committees explored issues that cut across the boundaries of the individual subject areas.

In reviewing the work of these committees, one is struck with the extent to which issues intersect. For example:

- o Quality education is an important end itself from the standpoint of individual development, but it also plays a crucial role in job training and economic development.
- o Housing is a basic human need, but where and how it is built impacts the environment and community character; how much it costs impacts on the state's ability to attract new workers.
- o The supply and price of energy affects businesses as well as individuals, and its production impacts the environment in ways that have public health as well as aesthetic consequences.

- o Drug abuse and crime among young adults is tragic in human terms, but it is also wasteful and costly in economic terms.
- o An abundance of natural and cultural resources enhances the quality of our lives and at the same time supports our economy by making Massachusetts a desirable place for businesses and their employees to locate and by attracting thousands of tourists each year.

The intersection of issues such as these is one of the strong themes that is emerging from the Blueprint process. It presents itself throughout the chapter on the economy that follows and will be addressed more fully in the final report.

INTRODUCTION

Massachusetts has been a crucible for innovation and dynamism in the U.S. and around the world. Sailing from ports like Boston and Salem, the great Yankee clipper ships opened up world trade routes. The Industrial Revolution began in Waltham and had its dramatic takeoff in Lowell. The Continental Army received its weapons from the Armory George Washington established on a hill in Springfield; the base of machining and metal working mills established there laid the base for the mass production technologies of the 20th century.

Even the first automobile built in the United States, the Duryea, was produced in Massachusetts. During our own time, the high technology industries that have transformed society were incubated in the universities, laboratories and garages of Massachusetts.

Unfortunately, Massachusetts has also known the problems of economic transition. Massive factory closings which hit much of the country in the 1970s and 1980s had been common here as early as the 1920s. For many decades, Massachusetts' economy lagged behind the national economy. But by the late 1970s, we had turned the economic corner to prosperity.

We now have a strong and diversified economy with industries as old as the needle trades and as new as biotechnology. The unemployment rate here has been among the lowest of the industrial states, averaging between 3% and 4%. Indeed, one of our biggest problems in the 1980s has been finding enough workers to fill available jobs.

Most indicators point to continuing growth in Massachusetts throughout the 1990s, although at a slower pace than we have experienced in recent years. They also foresee a labor market that continues to be tight. Economic forecasting is, of course, an inexact science; the economies of individual states can be swept up in the currents of national and international events that no one can predict or control.

Despite the generally bullish forecast for the next decade, it is always possible that unemployment may increase. The watchwords for all of us, therefore, must be preparedness and flexibility.

With this mind -- and with proper planning, innovation and genuine public-private partnerships -- Massachusetts can enter the 21st century ready to respond to, and in some cases create, changes that will further improve the quality of life for people here at home -- and around the country and the world.

Our ability to adapt to changing economic circumstances has always arisen from three principal sources: the resourcefulness of our people, the strength of our educational institutions and the progressiveness of our public policies. The 1990s will be no exception.

To assure that economic progress and prosperity continues into the 21st century Massachusetts must:

- o maintain, and when state revenues permit, increase its investments in public education, job training and other programs that support people;
- o adopt fiscal policies that provide sufficient revenue to meet the Commonwealth's need for services, without placing business and industry at a severe competitive disadvantage;
- o expand public-private initiatives to preserve manufacturing jobs, augment the labor force, enlarge the state's export base, develop new technologies and enhance productivity in the private and public sectors.

GOALS FOR THE YEAR 2000

A strong economy is one of the essential ingredients in any prescription for a high quality of life. It provides the means by which workers and their families can realize their hopes and dreams. And it provides a source of revenue to support vital state services -- programs to improve public schools, combat drug abuse and crime, protect the environment, build affordable housing, maintain roads and bridges and meet basic human needs.

To assure that our children and grandchildren enjoy the highest possible quality of life, Massachusetts must maintain steady economic growth into the 21st century. Toward this end, our goals for the year 2000 envision around a robust economy that reflects: (1) diversity in jobs; (2) genuine full employment demographically and geographically, and (3) active trading relationships within a worldwide economy.

1. Jobs

Massachusetts needs to maintain a strong, balanced economy that includes a mixture of jobs in traditional manufacturing, high technology and services. Such a mixture is essential to guard against overreliance on any particular sector and extreme vulnerability to recession.

We must strive to offer well-paying job opportunities to skilled labor in both traditional manufacturing areas such as plastics, footwear, apparel, furniture, and machine tools as well as in newer manufacturing areas such as microelectronics, photovoltaics, biotechnology, marine engineering, polymers, artificial intelligence and related software.

And, the state's economy must include jobs in a range of services including finance, insurance, health care, education, real estate, and tourism as well as in retail trade, fast food, custodial services and entertainment.

2. Employment.

Our goal is to attain genuine full employment. By this we mean an unemployment rate of between 3% and 4% for all groups of workers regardless of race, geographic region or gender.

An average statewide unemployment rate of between 3% and 4% is not genuine full employment if -- as they now do -- Hispanics and Blacks (especially teenage males) experience unemployment rates that are substantially higher. Nor is full employment really such if residents of communities like Fall River and North Adams continue to experience jobless rates of 5% or higher, while the rate in the rest of the state hovers at 3%.

3. An Export Economy.

Massachusetts' economy must include a strong export component by the year 2000. The Commonwealth imports 80% of its food and virtually all its energy fuels. To finance the import of these essential commodities, Massachusetts must export goods and services. Otherwise the state cannot survive, much less thrive.

In an increasingly competitive international marketplace, Massachusetts firms must compete with businesses and manufacturers worldwide simply to sell products next door in Connecticut. Yet compete we must to sustain our export-dependent economy.

ECONOMIC TRENDS TO THE YEAR 2000

With these goals in mind, Blueprint 2000 examined some key economic forces that will shape our economy in the near future. From this examination it is clear that Massachusetts faces unique challenges, many of which, ironically, stem from the Commonwealth's extraordinary prosperity.

The Blueprint 2000 committee examined alternative scenarios for how Massachusetts' economy could develop between now and the turn of the century. While the models differ in some respects, both envision a continuing tight labor market in which the number of potential jobs could exceed the number of workers available to fill them.

Under any likely scenario, the committee's overall prescription for state government is the same:

- o programs that respond to the needs of workers and their families, and
- o education and training to prepare for the jobs of the future
- o policies that are flexible enough to adapt quickly to changes in an ever-changing world economy.

Since 1975, Massachusetts has pioneered in mobilizing capital through the creation of private-public partnerships, in targeting investment to declining communities and in developing innovative education and training programs to bring the unemployed and marginally employed into the mainstream workforce.

The success of the economy, aided by these public policies, has in recent years kept unemployment rates consistently below 4% and encouraged wage growth well above the national average. Indeed, the Commonwealth's economic growth has been so rapid that it has put enormous pressure on the housing market, on the transportation system and on the natural environment.

Economic growth now poses an economic challenge, as well. With labor markets approaching full employment, the Commonwealth must continue its existing economic programs and initiate new ones in order to maintain a business climate and a productive workforce that can meet the expanding needs of industry and assure a rising and more secure standard of living that is shared more equally among all population groups and regions.

Key Findings of Blueprint 2000 Forecasting Group:

1. If present trends continue, Massachusetts could face a labor shortage.

The number of jobs in Massachusetts has grown steadily since the early 1980s. The number of people living in Massachusetts is also growing, but our population is changing demographically. As a result the number of people who make up the state's labor force may not grow rapidly enough to keep up with the new jobs that could be added by the year 2000.

By the year 2000 it is projected that the population of Massachusetts will increase slightly from its current level of 5.8 million to more than 6 million, with the average age of the population being older. The U.S. Census Bureau estimates that the number of Massachusetts residents between the ages of 18 and 64 will grow by about 130,000 by the end of the century. At the same time, economic projections suggest that employment demand could grow by about 450,000. That is to say, we could have more than 3 new jobs for every new worker between now and the end of the century.

Little additional labor force growth can be expected from traditional sources. Labor force participation rates here are already well above national levels. This is true for all age groups and for both men and women. Relative to the rest of the U.S. and most developed countries, we are "workaholics."

We can expect few workers will move here due to limiting factors such as lack of affordable housing and higher than average living costs.

On the other hand, some workers may move into Massachusetts or commute from nearby New England states if wages remain significantly higher than they are elsewhere. Even if this happens, Blueprint's panel of economists still forecast a tight labor market to the year 2000.

2. If present trends continue, manufacturing employment in Massachusetts will, at best, stabilize at its current level.

Manufacturing accounts for more than 600,000 jobs -- one fifth of the total in the Commonwealth. Yet, dramatic reductions have already occurred in this sector, creating dislocation for many workers. Between 1980 and 1987, over 76,000 manufacturing jobs were lost in the Commonwealth.

While manufacturing employment nationwide began to recover after 1986, Massachusetts has not shared in this trend. Even the job growth in the "high-tech" industry has slowed, from a rate of nearly 6 percent a year between 1979 and 1984 to one-half of one percent a year since then.

We do not understand fully why manufacturing in Massachusetts is declining relative to the U.S., but it is a disturbing trend. Assuming no major increases in the exchange rate of the dollar, the Blueprint 2000 Employment Committee concluded that improved global export performance of Massachusetts firms will, at best, offset productivity-induced reductions in manufacturing employment. The challenge will be to encourage sufficient innovation in the manufacturing sector to maintain current markets and expand into new ones wherever possible.

3. If present trends continue, Massachusetts increasingly will become a "service-based" economy.

Virtually all employment growth of potentially 450,000 new jobs between now and the year 2000 is projected to be in business and personal services, retail and wholesale trade, finance, insurance and real estate. Manufacturing employment is expected to remain roughly constant, while construction employment is likely to increase by, at most, 25,000 jobs.

As the economy shifts from "goods production" to "services", the required workforce skills will move toward professional, managerial, and technical expertise at one end of the jobs continuum and toward sales and service at the other. Relative to manufacturing and "high-tech," the service sector generally has a larger percentage of low-wage jobs and fewer middle-wage jobs.

These trends present two challenges. First, we must ensure a sufficient supply of adequately trained personnel for Massachusetts' businesses. Second, we must guard against the possibility of a more polarized labor market--with rising wages for college and university trained workers and falling wages for everyone else.

4. If federal procurement patterns change as expected, the amount of defense dollars coming into Massachusetts will, at best, stay constant and perhaps decline.

Between 1980 and 1985, Massachusetts military prime contracts rose from \$3.7 billion to \$7.7 billion. On a per capita basis, prime contract awards to Massachusetts firms rose to nearly \$1,400 in 1987, more than double the 1980 level.

According to one estimate, 20 percent of the state's high-tech manufacturing is now directly or indirectly related to military procurement.

The days of dramatic increases in military spending are clearly over. Yet experts disagree on precisely how spending patterns for defense will unfold over the next 10 years.

Most importantly for Massachusetts, the trends within defense spending favor our companies, as a shift already underway moves away from "platform" builders, such as aircraft manufacturers, and toward systems upgrades, improvements in electronics, software, etc. where most Massachusetts firms operate.

If slower growth in federal defense spending results in increased federal expenditures in areas such as health, education and welfare, this could also benefit the state. But jobs in these fields often require workers with very different training and skills.

The challenge to the state is to maintain its high technology industry and employment in the face of slow or no defense growth and then to prepare the state's labor force and companies for a shift in federal procurement demands.

5. Despite healthy growth in Massachusetts, all groups within Massachusetts have not benefited equally; inequities will continue if current patterns continue.

While the state's unemployment rate has remained below 4% during most of the last five years, specific groups still experience high unemployment because of inadequate skills, disabilities, lack of child care, and lingering discrimination.

In particular, large numbers of Black and Hispanic youth remain outside the mainstream of Massachusetts. High school dropouts have seen their average annual wage decline by more than 20 percent since 1973.

Poverty is becoming increasingly concentrated among single-parent families headed by women.

Moreover, while state government policies have helped to move jobs to areas with relatively higher rates of unemployment, substantial inequality in employment and wage growth persists in different regions of the state.

Dramatic increases in state revenues that could be used to equalize and spread distribution of economic benefits appear to have peaked; slower rates of growth in the state's fiscal base suggest increasing initiatives in specially designed training programs to spread jobs and wage growth to those still left behind.

The challenge will be to equip all segments of Massachusetts society with the resources needed to obtain highly productive jobs at good pay if genuine full employment is to be realized.

6. Facing a new set of challenges

The challenges facing Massachusetts during the remaining years of this century will be substantially different from those of the post World War II era, when the overriding economic problem was reducing the aggregate unemployment rate. Moving forward, the principal challenges will be assuring adequate capital and labor to meet the needs of expanding businesses and assuring that all citizens can share in the state's progress.

Barring a national economic crisis of major proportions, the current labor supply will be inadequate at current levels of productivity. If this happens, more and more firms could begin to face formidable labor constraints. Bidding wars could drive wages to prohibitive levels. Or, even worse, companies may be unable to attract additional workers at all.

Should this occur, Massachusetts could begin to lose its attraction as a location to maintain and expand business. In the long run, the forces of supply and demand will solve this problem, but in the near term -- now to the year 2000 -- the consequences could be unnecessarily harsh to business and eventually to labor as well. And, we would not pass on a strong economy to those who will live in the next century.

PRESCRIPTIONS FOR STATE GOVERNMENT ACTION

1. First the State must attend to basics.

Even with the best of intentions, government alone cannot assure a fully successful transition into the next century. What is needed is a solid team effort that includes business and labor as well as government. As part of the overall team, state government has several critical roles to play.

The first set of roles are traditional ones, and the state must "get them right" as its first order of business. Tax and fiscal policy must be set so as to provide sufficient revenue to meet the Commonwealth's need for adequate services and to provide for reserves in the case of downturns in national economic activity.

At the same time, the state must assure that effective tax rates and fees are set within a range that does not put Massachusetts industry at a severe competitive disadvantage to other regions of the country. Taxes may not be the most important factor that companies consider when deciding where to locate, but they do play a role in such decisions.

Similarly, the state's regulatory climate must ensure that the natural and social environment of the Commonwealth is preserved and enhanced, while not burdening business with superfluous reporting requirements and cumbersome bureaucratic procedures.

Ensuring environmental, social and economic concerns requires conscientious enforcement of sound consumer protection, environmental, occupational safety and job security regulations. However, the state must do more than just set standards of regulatory performance; it must continue to work closely with business and labor to assure that standards protect our citizens and the environment without placing unreasonable burdens on those being regulated.

Environmental and social goals need not conflict with economic goals. Rather, they should be seen as complementing each other. A clean environment and enlightened social programs make Massachusetts a desirable place for workers to live. And the revenue streams that flow from a strong economy support environmental and social programs.

The state government must also invest adequately in its physical infrastructure. Maintaining highways, expanding mass transit, assuring adequate water supplies, providing safe waste disposal, preserving harbors and seacoast from pollution, and ensuring adequate energy are all critical to maintaining competitive industry, improving the real standard of living for our citizens and sustaining a strong tourist industry.

The state must take the lead in providing adequate investment in education and training. While local communities will continue to have the major responsibility for primary and secondary education, the state must continue to assist with increased finances and with educational innovation.

Finally, the state must strengthen its commitment to crime prevention and public safety. It must aggressively pursue drug traffickers and work to eliminate drug abuse among students and workers. Too many young people are lured into crime and wind up in prison. Government must make every effort to prevent this loss to the community and the economy.

These traditional tax, regulatory, infrastructure, educational and social roles must be carried out effectively as the first order of state business throughout the 1990s. In addition, the state must pursue a set of innovative policies, some of which are already in place, to maintain momentum in the face of the economic and demographic trends outlined earlier.

These added roles include:

- o expanding the labor supply;
- o enhancing manufacturing as well as service jobs;
- o promoting export performance

2. Initiatives to Expand the Labor Supply

In the 1990s state government must use its resources to increase the number of working-age adults in the labor force. For most of the 1970s and 1980s, the state's quasi-public agencies have provided leading-edge programs to add venture capital, expansion capital, new technology development, and process technology improvements.

Massachusetts has already invested in innovative ventures to expand our capital base. Now we must find innovative and sophisticated ways to invest in human capital...people.

(a.) investing in people

The state starts from some experiences in more traditional investments in human capital, the training and employment programs sponsored by the federal government. CETA trained workers for largely public sector jobs in the late 1970s. JTPA, in the 1980s, with sharply reduced monies, directed training to private sector jobs.

Now, however, the state must become innovative first in adding more working-age adults to the labor force, that is, investing in people before training and employment services become relevant. In some instances the strategy is to keep people in the labor force before they drop out -- i.e. retire; in other instances, the strategy is to bring more people into the work force. This must be the focus of creative public policy for our economy in the 1990s.

(b.) older workers

Given the large number of additional workers needed to maintain economic momentum, a significant initiative must be taken to keep workers in the labor force.

This will involve public-private initiatives that target middle-aged and older workers. The state should help companies design services that acquaint workers scheduled to retire with opportunities for new parttime or fulltime positions within their companies, at other firms, or in community service. For example, retiring workers can help meet the pressing labor needs in health care and other service industries. Intergenerational work settings could afford opportunities for elders to pass along wisdom as well as care.

Utilizing the work potential of older workers -- on terms that suit their wishes, needs and limitations -- could provide a breakthrough for our state with its aging work force in the 1990s. Retirement benefits and pensions that can move with a former career employee without penalty must be explored by public as well as private employers.

The Blueprint 2000 demographic analysis indicates that slightly higher labor force participation rates for workers between the ages of 45 and 65 can fill much of the labor shortages described earlier.

It is recommended that the Commonwealth:

- o design with companies retirement counseling programs that facilitate employment, especially in sectors with labor shortages, including benefit and transition services that encourage such mobility;

- o provide training and education incentives to workers who choose new fulltime or parttime careers upon "retiring" from a 20-year or longer tenure of employment; and
- o create an intergenerational public service corps for retired workers who would like to work on a paid or unpaid basis for state or municipal agencies.

(c.) young and disadvantaged workers

At the other end of the working age spectrum, the state must continue its efforts to add new, young workers -- especially inner-city Blacks and Hispanics -- to the workforce. Their energy and talent is needed both to fill entry level jobs in manufacturing and services and to keep Massachusetts in the forefront in high technology and the professions.

More affordable child care services, early childhood development and nutrition programs, more wide-spread use of dropout prevention projects, more outreach and counseling to drug abusers and teen-age parents and better schools -- all are wise, essential investments in young people and young workers.

Programs such as the Boston Compact have helped students in school by providing work experience and the incentive to attend college. Initiatives to help youngsters who have dropped out of school and are not employed and scholarships to pay for apprenticeships with private employers and union should be considered.

One particular group of young people deserves special attention: those serving time in prisons and jails. Special training, education and support is needed to enable these young adults to get a worthwhile job when they leave prison and return to the community.

Current programs in this area are woefully inadequate. Failure to address the needs of this population results in a terrible waste of human and economic resources.

Many of these social programs for young people have been priorities of the Dukakis Administration since 1983. We know what types of programs work, and those that do should be implemented more widely in the 1990s, not only to improve the social environment but also to add significant new workers to the labor force.

(d) women

Nationally, two thirds of all new entrants to the labor market between now and the year 2000 are expected to be women. Hence, the female participation rate is especially important.

This holds true even in Massachusetts, where employment among women exceeds the national average. Of the 11 industrial states, only North Carolina reports a higher employment rate for women than Massachusetts.

Moreover, because of the state's low unemployment, Massachusetts has the very highest female employment/population ratio in the nation--nearly five percentage points higher than the U.S. average; 21 percentage points higher than West Germany; roughly 11-12 percentage points higher than Japan and the United Kingdom.

If the female employment rate here already exceeds most relevant national averages, how can we expect women to expand the labor supply? There are two possibilities:

- o expanding fulltime job opportunities for women; and
- o expanding child and elder care services.

While the number of women who work some time during the year in Massachusetts is higher than elsewhere, there are still many women who would like to work more hours each week if they could.

A lack of affordable, high quality child care in Massachusetts continues to be a substantial impediment. While the state has pioneered in child care benefits to bridge the transition from welfare to work and in corporate child care, there still is enormous unmet demand for child care. For example, a recent study concluded that 41% of nonworking parents with children under age 13 would seek employment if affordable childcare were available.

Massachusetts must redouble its efforts to promote employer-sponsored and community-based child care to achieve a scale of services that can accommodate the needs of all women who want to work and in many cases need to do so to support their families. Specific recommendations to address childcare needs will be included in a separate report from a Blueprint subcommittee on Family and Workplace that will be released at a later date.

With an aging workforce, more and more workers in the 1990s will be caring for parents and grandparents as well as children. Proactive public policies that embrace expanded dependent care services -- for older dependents as well as children -- can ensure as many workers as possible in our state.

Massachusetts must continue to place a high priority on training programs such as Employment and Training (ET), which sustain childcare and health benefit supports for new workers until they can pay for these services themselves. ET has enabled thousands of women with children to get off the welfare rolls for good. It has made an important contribution to our labor force.

(e) immigrants

Finally, immigrants to Massachusetts are another important source of new workers. Recent immigrants have tended to be non-English speaking families, from Southeast Asia, Central America, Caribbean islands, the Azores, Africa, and the Middle East. English language courses geared toward preparing immigrants for employment and training programs should be promoted by the Commonwealth.

(f). we need each other

In brief, the 1990s labor policy is based on a simple premise: we need each other. Every working age adult who wants to work or needs to work can help sustain economic momentum through this century.

For the next eleven years, good social policy and good economic policy can go hand-in-hand. Every youngster who graduates from high school ready and interested in work is important to us all. Every person regardless of race, native language, age or sex can be a significant contributor to economic growth.

And we will need every new worker, every current worker, working together, to sustain and extend prosperity to every citizen. The prospects are bright; yet the challenges of a new focus in public policy are considerable, too.

3. Enhancing Labor Productivity

Even with additional workers, the potential for business growth is likely to outstrip the number of workers unless our workers become more productive.

In the past, improving productivity has often had mixed effects. On the one hand, increased productivity led to higher wages and more competitive businesses. But, it also often meant less job security for some workers. Automated production can enhance productivity, but during periods of slack demand, it can also cost many workers their jobs.

In the near future, however, with continued strong demand for labor, increases in productivity should increase business output without dislocating large numbers of workers.

What can state government do to assist businesses in improving productivity? The level and growth rate of productivity is determined by at least the following factors: the levels of capital investment; the level of technological progress; the quality of the labor force; and the nature of labor-management relations. The state has a role to play in all four.

(a) capital investment

In general, the private banking system provides adequate capital for innovation for existing, stable firms. Yet, particular market niches continue to be poorly served by private banks.

Here the state can continue to underwrite promising small and mid-sized ventures through the Massachusetts Industrial Finance Agency; the Community Development Finance Corporation; and the Massachusetts Technology Development Corporation.

By providing loan guarantees, new product development funds, and assistance for technological innovation, the state can leverage private sector money toward the goal of enhancing productivity. The Commonwealth should experiment with both debt and equity holdings for these purposes.

(b) technological progress

To improve technological progress directly, the state should continue to leverage private and federal investments in emerging technologies through Centers of Excellence Corporations in biotechnology, photovoltaics, polymers, microelectronics, marine engineering, and ceramics.

In addition, the state should continue to promote technology transfer and adoption efforts through the Massachusetts Product Development Corporation and the Center for Applied Technology. Expansion of the state's Industrial Service Program could be the most effective means, adding a small staff of engineers and advisors to assist small and medium sized firms with their decisions about adopting new technologies.

(c) human productivity

Policies to enhance human productivity are important as well. The Department of Employment and Training should offer clients information and counselling on life-long training and career ladders. In Sweden, this is part of an "active labor market policy". At any given time, as many as three percent of the Swedish labor force is enrolled in retraining programs to improve their productivity and prepare them for evolving new occupations.

Given the very strong balances in the Unemployment Insurance Trust Fund, the Commonwealth should consider using a portion of these balances to establish a productivity-building training program. In the 1990s the unemployment insurance benefit should be converted into an income security-plus-training-and-education program.

In an information age, more and more job training is actually done in college and university settings. As such, one element for enhancing

labor productivity is an expansion of the public higher education system of Massachusetts. The state's Board of Regents should develop a plan for community and state colleges and the state universities to respond to workforce needs in education and training for 21st century jobs. Plans also should be made to secure private as well as public funding to respond to this challenge.

(d) labor-management relations

Finally, the state could use its influence to improve labor-management relations within the private sector. The "Paid Education Leave" program (PEL) pioneered by the United Auto Workers and General Motors could serve as the model for state initiatives.

Under the PEL program, groups of 25 to 40 representatives from both labor and local management attend a four-week training program to study the state of their industry; the global context within which their industry operates; the nature of new technology; the influence of government policy on their industry; and techniques of strategic planning that will allow labor and management to work together to solve internal production and human relations problems that inhibit increased productivity, product quality, job security and international competitiveness.

The Commonwealth should develop, on an experimental basis, a PEL-type program in key manufacturing sectors such as machine tool operations, computer production and needle trades operations. The state might fund the development of curriculum materials for such programs, while participating companies agree to pay for release time of their employees.

The state should consider developing PEL-type programs for its own internal use. Encouraging productivity enhancement within government through this type of strategic planning education as well as adoption of new technology would also be useful to public sector operations.

4. Enhancing the Export Base of the Massachusetts Economy

Most firms in Massachusetts are small and medium sized operations without the resources to market or communicate within a worldwide economy. Yet many such firms seek to offer their products and services abroad. The state can and must assist these firms through its Office of International Trade and Investment (OITI) and Massport.

(a) export trading company

Massachusetts should create an Export Trading Company drawing together OITI, Massport, and financial institutions to offer comprehensive international trade assistance to small and medium sized firms. The Trading Company could serve as a one-stop source for information on federal assistance programs, lines of credit, and potential foreign customers to fit the particular interests of a Massachusetts firm.

Preliminary analysis of the need for an Export Trading Company was conducted several years ago. The need is even more apparent into the 1990s as Massachusetts faces the full integration of the European Common Market; expanded trade with China, especially Guandong Province with which the state signed a trade and cultural exchange agreement in 1984; the opening of trading with Eastern Europe; and important Canadian trade possibilities.

(b) foreign visitors

Massachusetts should create an organized, systematic response to the enormous number of foreigners who visit Massachusetts to acquaint them with possibilities for trading relationships. Those who come to avail themselves of our world class medical, educational, cultural, and natural resources should be introduced to the potential for building trading arrangements with Massachusetts firms.

Massport, the Executive Office of Economic Affairs, the chambers of commerce and other major business groups should design a program to establish business relationships with foreign visitors who come to our state daily.

(c) marketing cooperatives

Finally, whether enhancing our exports to other states or other countries, Massachusetts can expand markets for small and medium sized firms through development of marketing cooperatives in key industries. The experience of the Needle Trades Action Project in Fall River is an example. The state, in cooperation with the non-profit Industrial Cooperative Association, is working to establish a cooperative of private apparel manufacturers to assist them in adopting new technologies, marketing products, and ultimately establishing itself as a manufacturer of private label products.

The intent, in this industry, is to enable Massachusetts apparel firms to create a market niche for low-volume, high quality, high value-added, quick turn-around apparel production. If this effort proves successful, the state should consider developing other such cooperatives, for example, for the Connecticut Valley machine tool manufacturers.

5. State Government Must Play an Active Role.

People often ask why not let business go its own way? Why not cast state government's role only as a regulator to protect people's health and safety and consumer interests?

The answer is simple: Massachusetts will only compete successfully with other states to keep jobs and expand employment if state government becomes a partner with business, labor, and education.

Other states already are moving aggressively to establish this broader partnership. Ten other states have programs modeled after our Centers of Excellence to promote new technologies and related jobs through collaborations with industry and universities. In most state, these ventures receive substantially more state funds than our program. And federal funds to support the development of these new technologies are now being dispersed throughout the United States, whereas Massachusetts used to enjoy the lion's share. Competition among states for the jobs of the future is intense and will intensify in the 1990s.

Moreover, the experience of recent years clearly shows that, at the margin, state government initiatives can make a difference -- save a company through the ISPs quick actions; add more women workers through the corporate child care program and ET; spread jobs throughout the state with the Governor's regional tours program.

At the margin, state government in the next decade must continue to fill some niches that business cannot; exercise some initiatives to spread prosperity to all; draw more resources into the labor force to maintain momentum; and build an essential collaboration among business; labor, government and educational institutions.

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